

REMARKS

This is a response to the Office Action mailed on December 10, 2007. Claims 1, 3-8, and 10 are presented for examination. Claims 2 and 9 are hereby cancelled without prejudice. Claim 1 is amended to incorporate the subject matter of former claim 2. Claim 5 has been amended to depend only from claim 4 and claims 7 and 8 have been amended to depend only from claim 1. No new matter has been added by these amendments.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-6 and 8-10 were rejected under 35 U.S.C. § 102(b) as anticipated by EP1093160 (Suga). Applicants respectfully disagree.

It is well settled that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in ... [the] claim." Manual of Patent Examining Procedure (MPEP) § 2131 (8th ed., October 2005); and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 recites:

1. An anisotropic-electroconductive adhesive comprising:
 - an insulating adhesive component containing a radical polymerizable compound and a polymerization initiator; and
 - a plurality of insulating coated electroconductive particles dispersed in the insulating adhesive component, the insulating coated electroconductive particle having a coating layer made of insulating thermoplastic resin on a surface of an electroconductive particle,

wherein an exothermic peak temperature of the insulating adhesive component is in the range of 80°C~120°C and a softening point of the insulating thermoplastic resin is lower than the exothermic peak temperature of the insulating adhesive component.

(Emphasis added)

In rejecting former claim 2, the limitations of which are now incorporated into amended claim 1, the Examiner stated that the limitation "an exothermic peak temperature of

the insulating adhesive component is in the range of 80°C~120°C” could be found in ¶ 15 of Suga. However, ¶ 15 of Suga actually discloses “a curing initiation temperature of 80-150°C may be used.” A curing initiation temperature is the temperature at which curing is initiated. This is different from the exothermic peak temperature, which is the peak temperature produced by the curing reaction. *See, e.g.* the specification of EP0845507, which discloses numerous materials for which the curing initiation temperature and exothermic peak temperature are *different*. Thus, Suga fails to disclose the limitation “an exothermic peak temperature of the insulating adhesive component is in the range of 80°C~120°C.”

Also, the Examiner finds the limitation “a softening point of the insulating thermoplastic resin is lower than an exothermic peak temperature of the insulating adhesive component” to be inherent. Office action, p. 3. The Examiner relies on inherency, because Suga fails to disclose this limitation expressly. For example, Suga does not mention the exothermic peak temperature at all. However, “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the alleged inherent characteristic *necessarily* flows from the teaching of the applied prior art.” *Ex parte Levy*, 17 USPQ2d 1461,1464 (Bd. Pat. App. & Int. 1990) (emphasis in original). Here, the cited limitation of claim 1 does not *necessarily* flow from the teaching of Suga. For example, Suga at ¶ 22 teaches that the insulating coating should be “melted or destroyed when the connecting material is subjected to heat-pressing.” This allows for various possibilities, for example that the coating is destroyed by the mechanical forces applied during “heat-pressing.” Thus, Suga also fails to disclose this limitation, either expressly or inherently.

Because Suga fails to disclose each and every limitation of claim 1, it cannot anticipate claim 1, and the rejection of this claim under 35 U.S.C. § 102(b) should therefore be withdrawn. Claims 2 and 9 have been cancelled. The rejections of these claims are therefore moot and should be withdrawn. Claims 3-6, 8 and 10 are dependent directly or indirectly from claim 1. The rejections of these claims should therefore be withdrawn, for at least this reason.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-6 and 8-10 were alternatively rejected under 35 U.S.C. § 103(a) obvious over Suga. Applicants respectfully disagree.

In *KSR International Co. v. Teleflex Inc.*, the U.S. Supreme Court rejected the Federal Circuit's *rigid application* of the "teaching, suggestion, motivation" test ("the TSM test") in determining obviousness in the particular case in question. 127 S.Ct. 1727, 82 U.S.P.Q.2d 1385, 1395 (2007) (emphasis added). According to the Supreme Court, the correct analysis is set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966). *Id.* However, the *KSR* decision indicated that while the TSM test is not the sole method for determining obviousness, it may still be used and in some cases is helpful. *Id.* at 1396. ("When it first established [the TSM test], the Court...captured a helpful insight."). Indeed, the guidelines for the examination of patents in the wake of the *KSR* decision make clear that an Examiner may still apply the TSM test, after resolution of the *Graham* analysis. See Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57526, 57528 (Oct. 10, 2007) ("USPTO Guidelines").

The *Graham* factual inquiries are: (1) determine the scope and contents of the prior art; (2) ascertain the differences between the prior art and the claims at issue; (3) resolve the level of ordinary skill in the pertinent art; and (4) evaluate any evidence of secondary considerations. *KSR*, 82 U.S.P.Q.2d at 1395 (citing *Graham*, 383 U.S. at 15-17). Once the *Graham* factors have been addressed, the Examiner may apply the TSM test, asking whether (1) a teaching, suggestion or motivation exists in the prior art to combine the references cited, and (2) one skilled in the art would have a reasonable expectation of success. See USPTO Guidelines at 57534.

The *Graham* factual inquiries begin with an analysis of the scope and content of the prior art, in view of the scope of the claimed invention. See USPTO Guidelines at 57527 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005)).

Here, the Examiner did not present a *prima facie* case of obviousness over Suga based on the *Graham* factual inquiries for claims 1-6 and 8-10. Rather, the "alternative" obviousness discussion is focused solely on the limitation of claim 1 that recites "a softening point of the insulating thermoplastic resin is lower than an exothermic peak temperature of the insulating adhesive component," and evidently serves as a back-up for the alleged inherent anticipation of this limitation discussed above. The Examiner does not identify a suggestion or motivation in Suga or elsewhere to modify the material of Suga so that "a softening point of the insulating thermoplastic resin is lower than an exothermic peak temperature of the insulating adhesive component." As previously noted, Suga does not even

refer to an exothermic peak temperature. The Examiner contends that "otherwise the insulating coating would remain and there would be no electrical connection formed as required." Office action, p. 4. However, this is just a restatement of the inherent anticipation argument discussed above, and as noted the disclosure of Suga allows for other possibilities, such as destruction of the insulating layer by mechanical forces.

Further, there is no teaching or suggestion in Suga of the limitation "an exothermic peak temperature of the insulating adhesive component is in the range of 80°C~120°C," nor does the Examiner identify any motivation for one of ordinary skill in the art to modify the material of Suga to include this limitation.

Accordingly, claims 13-6, 8, and 10 are not obvious over Suga and the rejections of these claims under 35 U.S.C. § 103(a) should be withdrawn. Claims 2 and 9 have been cancelled. The rejections of these claims are therefore moot, and should be withdrawn.

Claims 1-10 were rejected under 35 U.S.C. § 103(a) as obvious over Suga in view of U.S. 6,158,115 (Tsukagoshi). Applicants respectfully disagree.

Preliminarily, claims 2 and 9 have been cancelled. The rejections of these claims are therefore moot, and should be withdrawn.

Regarding the limitation of claim 1 "a softening point of the insulating thermoplastic resin is lower than an exothermic peak temperature of the insulating adhesive component," the Examiner on p. 6 of the Office action again relies on an inherency argument (though here calling it "intrinsic" rather than "inherent"), and in the alternative, obviousness over Suga, in this case combined with Tsukagoshi. As stated above, this limitation is not inherent because it does not *necessarily* flow from the teaching of Suga. Again, regarding the alternative obviousness finding, the Examiner does not identify a teaching, suggestion or motivation in Suga to arrive at an anisotropic-electroconductive adhesive wherein "a softening point of the insulating thermoplastic resin is lower than an exothermic peak temperature of the insulating adhesive component." Again, Suga does not even mention exothermic peak temperature. Tsukagoshi does not cure the deficiency of Suga. Indeed, Tsukagoshi teaches away from the present invention. See col. 11, ll. 51-62, where Tsukagoshi teaches that particles with plastic cores and *conductive* coatings are preferable—*i.e.*, the opposite configuration of the present invention.

Regarding former claim 2, now incorporated into claim 1, the Examiner notes that Tsukagoshi at col. 10, ll. 55-67 discloses an exothermic peak temperature in the range of 50

to 150°C. However, claim 1 recites a narrower range, namely 80 to 120°C, and this is a critical range. As explained in the specification (see the PCT publication at page 7, lines 6-7), if the exothermic peak temperature is above 120°C the desired quick curing cannot be achieved, and, on the other hand, a material with an exothermic peak temperature below 80°C will present storage problems.

Claims 1-10 were also rejected under 35 U.S.C. § 103(a) as unpatentable over Tsukagoshi in view of Suga—that is, over the same two references, but with Tsukagoshi used as the “primary” reference. However, switching the roles of the two references does not change the substance of the arguments, particularly regarding the limitations of claim 1 discussed above, and Applicant’s reply to those allegations remains the same. In other words, the limitation of claim 1 “a softening point of the insulating thermoplastic resin is lower than an exothermic peak temperature of the insulating adhesive component” is not inherent because it does not *necessarily* flow from the teaching of Tsukagoshi. The instant claims are not obvious because there is no suggestion or motivation to modify the material of Tsukagoshi to arrive at the claimed invention, and Tsukagoshi in fact teaches away from the present invention. See col. 11, ll. 51-62, where Tsukagoshi teaches that particles with plastic cores and *conductive* coatings are preferable—*i.e.*, the opposite configuration of the present invention. Also, again, while Tsukagoshi at col. 10, ll. 55-67 discloses an exothermic peak temperature in the range of 50 to 150°C, claim 1 recites a narrower range, namely 80 to 120°C, and this is a critical range. As explained in the specification (see the PCT publication at page 7, lines 6-7), if the exothermic peak temperature is above 120°C the desired quick curing cannot be achieved, and, on the other hand, a material with an exothermic peak temperature below 80°C will present storage problems.

Because neither Suga nor Tsukagoshi, alone or in combination, teach, disclose, or suggest all the limitations of claim 1, claim 1 is not obvious over these references, and the rejections of claim 1 under 35 U.S.C. § 103(a) should be withdrawn. Because claims 3-8 and 10 are dependent directly or indirectly from claim 1, they are also patentable over the references, and the rejections of these claims should also be withdrawn.

Conclusion

In view of the above, applicants respectfully submit that the present application is in condition for allowance. A favorable disposition to that effect is respectfully requested.

No fees are believed to be due with this submission. Please charge any fee that may be due or credit any overpayment to Jones Day Deposit Account No. 50-3013.

Should the Examiner have any questions or comments concerning this submission, he is invited to call the undersigned at the phone number listed below.

Date: March 10, 2008

Respectfully submitted,



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